

**IN THE CLAIMS:**

1. (Currently Amended) A system for cooling a processor, the system comprising:  
the processor;  
a heat sink assembly having a fan, walls a plurality of fins, and a bottom surface, wherein the walls plurality of fins and at least a portion of the bottom surface define an air channel channels, and the heat sink assembly is configured to be disposed onto the processor; and  
a heat sink lid coupled to the heat sink assembly, wherein:  
~~the heat sink lid is configured to leave a substantial portion of the air channel uncovered~~ only covers a portion of the air channels proximate the fan,  
the heat sink assembly is further configured such that air flows directly from the fan along the bottom surface of the heat sink assembly, and  
~~the length of the at least a portion of the bottom surface of at least one fin of the plurality of fins is equal to or grater~~ greater than the length of the processor.
2. (Original) The system of claim 1, further comprising a thermal adhesive disposed on an outer surface of the heat sink assembly for thermally coupling the heat sink assembly to the processor.
3. (Previously Presented) The system of claim 1, wherein the uncovered portion of the air channel reduces air flow noise in the system during operation.
4. (Previously Presented) The system of claim 3, wherein the uncovered portion of the air channel reduces air flow noise by preventing the formation of a standing wave within the air channel during operation.
5. (Previously Presented) The system of claim 4, wherein the uncovered portion of the air channel prevents the formation of the standing wave by preventing the reflection of an incident wave propagating within the air channel during operation.

6. (Original) The system of claim 1, wherein the heat sink lid includes an edge configured to reduce turbulent flow of air escaping from the air channel and flowing across the edge.

7. (Original) The system of claim 6, wherein the edge is substantially perpendicular to a direction of air flow within the air channel.

8. (Original) The system of claim 1, wherein the processor comprises a graphics processing unit.

9. (Original) The system of claim 1, wherein the processor comprises a central processing unit.

10. (Original) The system of claim 1, wherein the processor comprises an application-specific integrated circuit.

11-16. (Canceled)

17. (Currently Amended) The system of claim 1, wherein the heat sink assembly further has a wall and the heat sink lid is directly coupled to the ~~walls~~ wall.

18. (Previously Presented) The system of claim 1, wherein the bottom surface is substantially flat.

19-21. (Canceled)